

913 cont.  
f) sending said recorded wide band excitation; input signals and said frequency synchronization signal to said acquisition control computer via said telemetry network; and,

g) analyzing said recorded wide band excitation input signals using stochastic processing techniques to estimate the system transfer function.

75. (New) The method in Claim 72 wherein said telemetry network is selected from the group consisting of fiber optic links, radio frequency links, microwave links, optical links, and hard wiring links.

76. (New) The method in Claim 72 wherein said telemetry network is selected from the group consisting of daisy chain architecture and star architecture.

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### REMARKS

In paragraph 4, the Examiner has objected to the abstract because it contains legal phraseology such as "comprising" as well as listing a reference "Z:....". The Abstract has been amended to eliminate these objections.

In paragraph 5, the Examiner has indicated a desire for a copy of each of the 3 prior art references which Applicants mention on pages 29 and 31 of the Specification. Enclosed as Exhibits A, B and C are true copies of each of these references.

In paragraph 6, the Examiner objects to the use of the term "rich frequency content", in Claim 1. Applicants have removed the term "rich frequency content" from, and has

otherwise modified the other terms of Independent Claim 1 to satisfy the Examiner's objections.

In paragraph 6, the Examiner also objects to the term "said input signal" in Claims 2-6. Applicant has added the phrase, "low power, wide band" to each Claim to satisfy the Examiner's objection. The Examiner has objected to the term "said non-parametric technique" in Claims 8-10. Applicant has amended Claims 8-10 to depend from Claim 7 wherein the non-parametric technique is introduced.

In paragraph 6, the Examiner objects to the term "said parametric technique" in Claims 12-16. Applicant has amended Claims 12-16 to depend from Claim 11 wherein the parametric technique is introduced. In paragraph 6, the Examiner also objects to many portions of Claim 17. Applicants have canceled Claim 17, as amending it in place produces a messy and hard-to-read claim. New Claim 72 takes its place with a new dependent claim, No. 73, associated with it.

The Examiner goes on in paragraph 6 to object to Claim 18 and directing the word "data" be inserted in "single recorder/processor". Applicants have done this in Claims 18-20. The Examiner has complained of the terms "the said" in Claims 21-31, 34 and 40-45. Applicants have deleted the term "the" from all these claims. The Examiner has complained of the words in parentheses in Claims 26-28 as adding ambiguity to the claim. Applicants have deleted these items from the claims. The Examiner continues in paragraph 6 stating that, in Claim 30, 34 and 35, the term "said synchronization signal" should be "said frequency synchronization signal". Applicants have corrected this.

The Examiner continues in paragraph 6 to complain of the term “the data stream” in Claims 30 and 34. Applicants have corrected this by changing the term to “said received and recorded wide band excitation input signals”. The Examiner complains of the term “the received signal” in Claims 36-38 stating that the antecedent basis is plural. Applicants have corrected this by pluralizing the terms. The Examiner states that in Claims 38 and 39 the term “data recorders/processors” has [*sic* no?] antecedent basis. Applicants have placed the terms “said spatially distributed” in front of the term to give it antecedent basis.

The Examiner has complained in paragraph 6 that Claim 40 cites “the said waveform synthesizers” whereas the antecedent basis is “one or more waveform synthesizers”. Applicants have corrected this by adding the term “said one or more” to Claim 40. Applicants have also corrected the lack of an antecedent basis in Claim 41 by having it depend from Claim 40 where the term “said modulated signal” is introduced. The Examiner states that in Claim 45, the terms “the desired center frequency” lack a clear antecedent basis. Applicants have amended the claim to remove this problem.

The Examiner has objected to Claim 46 for a variety of reasons. Amending Claim 46 is too complicated so that Applicants have canceled Claim 46, corrected the problems and have rewritten it as new Claims 74 and 75. The Examiner has objected to Claims 47-60 for a variety of reasons. Applicants have amended them to avoid the objections.

The Examiner goes on in paragraph 6 to object to various portions of Claims 62 to 69. Applicants have amended Claims 63, 63, 67, 69 and 70 while canceling Claims 64-66 and 68.

In paragraphs 7 and 8, the Examiner has rejected Claims 29 and 35 under 35 U.S.C. §112 2<sup>nd</sup> paragraph stating the Markush Groups claim therein do not possess at least one property in common and are ambiguous. Applicants have amended Claims 29 and 35 to remove this rejection and have added new Claims 75 and 76.

The Examiner advises Applicants in paragraph 9 that it is their duty to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. §103(a) and potential 35 U.S.C. §102(f) or (g) prior art under 35 U.S.C. §103(a). The Applicants advise that they are the joint owners of all claims presented in this application.

In paragraph 10, the Examiner rejects Claims 1-16 under 35 U.S.C. §103(a) as being unpatentable over the Applicants' admissions of the prior art in view of Krayeski et al. This rejection is respectfully traversed and reconsideration is requested. Krayeski's invention measures reflected power from an antenna within a circuit. This is a reflection measurement. While some individual components (e.g. mixers, receivers, transmitters, etc.) bear some similarity to components in the instant invention, they are: (1) not configured the same way, and (2) do not solve (or even address) the same problems as those of the claimed invention. In addition, there is no teaching reference that suggests or details that the teachings of Krayeski et al may be combined with the alleged admissions by Applicants of the prior art.

Krayeski et al does not employ wide band excitation, which would serve him no purpose anyway. But wide band excitation is fundamental to the instant claimed invention, the functionality of the system, and to the overall invention. Unlike the claimed invention,

Krayeski et al does not employ stochastic processes, which would serve him no purpose anyway. Stochastic processes are fundamental to Applicants' invention and to the successful operation of the claimed invention. Ironically, the claimed invention does not solve Krayeski's et al problem either. These two inventions are fundamentally different in both form and function. The fact that certain electronic processes and certain mathematical processes were known prior to the filing date of Applicants' invention does not provide an allowable combination to make Applicants' invention obvious under 35 U.S.C. §103.

In paragraph 11, the Examiner rejects Claims 17-38 and 46-51 under 35 U.S.C. §103(a) as being unpatentable over Russell et al in view of the Applicants' admissions of the prior art. This rejection is also respectfully traversed and reconsideration is requested. Russell et al does not disclose the low power, wide band test technique which is essential to Claims 47-51. Rather Russell et al discloses a distributed system of seismic sensors that can be synchronized in their detection of signals. However, Russell et al's invention is not a transfer function measuring device as the Examiner admits ("Russell et al does not clearly disclose steps d and f.") (Page 17 of the Examiner's Office Action). In fact, Russell et al does not even *hint* that his invention is a transfer function measuring device.

In paragraph 12, the Examiner also rejects Claims 39-45 under 35 U.S.C. §103(a) as being unpatentable over Russell et al in view of the Applicants' admissions of the prior art and further in view of Henry, Jr. This rejection is also respectfully traversed and reconsideration is requested. The Examiner has evidently cited Henry, Jr. for the purpose of illustrating that synthesizers are used in certain combination apparatuses. However, there

is no more of a teaching in Henry, Jr. to combine its teachings with that of Russell than it is to combine its teachings with that of Applicants' admissions of the prior art. There is no overall suggestion that Russell et al can be combined with Henry, Jr. and Applicants' admissions to arrive at the claimed invention.

The Examiner is charged with the duty to cite references that teach Applicants' invention, *In re Wood*, 599 F.2d 1032, 202 USPQ 171,174 (CCPA 1979): ("...[t]he test for obviousness is not whether the features of one reference may be bodily incorporated into another... Rather, we look to see whether combined *teachings* render the claimed subject matter obvious") [emphasis the court's]. Here, neither Kryaski, et al, Russell et al, nor Henry, Jr. teach, suggest or hint Applicants' claimed invention.

The Examiner also must produce references that contain a suggestion to combine or modify the cited references to reach Applicants' claimed invention, *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 311 (Fed. Cir. 1983): "In concluding that obviousness was established by the teachings in various pairs of references, the district court lost sight of the principle that there must have been something present in these teachings to suggest to one skilled in the art that the claimed invention before the court would have been obvious"). Here, neither Kryaski, et al, Russell et al, nor Henry, Jr. suggest or teach that they may be combined to achieve Applicants' claimed invention. In fact, up until the present invention, it was not thought possible to ever undertake the determination of a transfer function in large equipment without the use of a highly expensive anechoic chamber.

Applicants now present evidence of secondary considerations that are important to

their argument that the claimed invention is not obvious within the meaning of 35 U.S.C. §103(a). This evidence may be quite relevant to the issue of unobviousness, *Stratoflex, Inc. v. Aeroquip Corporation*, 713, F.2d 1530, 1538-40, 218 USPQ 871, 879 (Fed. Cir. 1983) "...evidence of secondary considerations may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to be obvious in light of prior art was not."

The first document, marked Exhibit D, is the Declaration of Dr. Robert A. Koslover, presently a senior scientist at Scientific Applications & Research Associates, Incorporated (SARA) who is not one of the inventors but who has studied the instant invention in detail (trademarked CASSPER® -Configurable Automated System for Sensing and Processing Electromagnetic Radiation). It is his belief that the claimed invention is not obvious.

The second document, marked Exhibit E, is a true copy of Evaluation Engineering's Readers Choice Awards showing its award to the inventors for the best EMC product in 1999 (page 2 "CASSPER EMI Test"). This document clearly evidences the acceptance in the industry that the CASSPER® system is truly unique among those in the field (skilled in the art).

Exhibit F is a copy of a HEART Conference Meritorious Paper Award, presented by the inventors and others, showing a description of the invention to have received the distinction of a "Meritorious Paper Award" at the March, 1999 Conference of Hardened Electronics And Radiation Technology. This document also clearly evidences the acceptance in the industry that the CASSPER® system is truly unique and unobvious among

those in the field (skilled in the art).

Exhibit G is a copy of ChipCenter Product of the Week Award, showing the claimed invention to have received the distinction of "PRODUCT OF THE WEEK". This document further evidences the acceptance in the industry that the CASSPER® system as truly unique and unobvious among those in the field (skilled in the art).

Exhibit H is a copy of product literature concerning the claimed invention showing the uniqueness and unobviousness of its use in providing a valuable analytical tool to industry without the requirement of a highly expensive anechoic chambers and at a far greater accuracy level than heretofore even contemplated let alone achievable.

Exhibit I is a copy of another piece of product literature concerning the claimed invention, showing the uniqueness and unobviousness of its use in providing a valuable analytical tool to industry without the requirement of a highly expensive anechoic chambers and at a far greater accuracy level than heretofore even contemplated let alone thought achievable.


Exhibit J is a Declaration from Applicants' counsel attesting to the authenticity of Exhibits A-C and E-I.

Applicants' counsel has addressed all issues raised by the Examiner in this first Office Action. All Claims objected to or rejected by the Examiner have been either amended or canceled. The Examiner did not raise any objection to Claims 7, 11, 31, 32, and 61 and they have been left in their original format. Six claims have been canceled and three new claims have been added. If any issues have not been adequately addressed it was purely



unintentional and the Examiner is invited to telephone counsel. The application now appears to be in condition for passage to allowance and such action is earnestly solicited.

Respectfully submitted,



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